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EXAMINER

SHIFERAW, ELENI A

ART UNIT	PAPER NUMBER
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2436

NOTIFICATION DATE	DELIVERY MODE
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11/12/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/593,095	Applicant(s) WERNER ET AL.	
	Examiner ELENI A. SHIFERAW	Art Unit 2436	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-10 are pending claims 11-12 are cancelled.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/21/2010 has been entered.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 12/15/2006 and 09/15/2006 have been considered. The submission is in compliance with the provisions of 37 CFR 1.97. Form PTO-1449 is signed and previously attached hereto.

Oath/Declaration

4. The oath filed on 09/15/2006 complies with all the requirements set forth in MPEP 602 and therefore is accepted.

Drawings

5. The drawings filed on 09/15/2006 are accepted.

Response to Amendment

6. The objection to claim 8 is withdrawn in view of applicant's amendment.

Specification

7. The specification filed on 09/15/2006 is accepted.

Response to Arguments

8. Applicant's arguments and amendments are fully considered and arguments are moot in view of new ground of rejection and examiner's argument herein below:

Regarding argument 'nothing in Tindal associates the network device configuration records or their associated network devices with a multitude of IT systems', remark page 9 par. 2, argument is not persuasive because even the title of Tindal is regarding "System/method for configuration, management and monitoring network resources" and Tindal further describes "Network device configuration records e.g. of edge router, core router ..." (see par. 38-39). The network device configuration records are associated by linking network managers and stored in the 'configuration records' and searched according to equipment type e.g. routers, optical devices, etc and also searched according to device type e.g. edge router, core router, etc., device location, device manufacturer, device model, device name, operational status, etc. The directory 165 can be used to enable directory-based networking. Tindal teaches (on par. 0042 and 0044) The configuration reader 195 can also retrieve the intended configuration of the target device from the configuration storage 187 and pass that intended configuration to the configuration comparator 190. The configuration comparator 190 can then compare the actual configuration and the intended configuration and present the differences to the administrator 110. The network devices of Tindal correspond to a multitude of different network systems as defined in claim 1 (see par. 44).

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Regarding argument Shorter does not disclose/suggest entities and consistency service and would not have been obvious to one ordinary skill in the art to combine with the other reference, argument is certainly not persuasive because Shorter et al. teaches a reference storage a specific entity in specific IT system can be addressed through the adapter of the specific IT system **(see fig. 2 adapters 110 and IT systems in different retail channels 220... data control point 250)** and based on such a reference stored in the reference storage **(see par. 27-29, 13-17 and figs. 1-2)**. **And sufficient motivation to combine is provided. The examiner did provide a broad reasonable interpretation consistent with the applicant's disclosure, during examination.**

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

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Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. **Claims 1-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-5 of copending Application No. 10593094.** Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant case, all elements of claims 1-10 correspond to the claims of the copending claims and encompass the scope of claims 1-10 of the instant application. The instant application generally claims (**see claim 1**) A method that validates a consistency of attributes of entities modeling a physical asset of a utility, the entities are stored in data sets of a multitude of different IT systems of the utility comprising entities assigned to entity types and consistency validation service including ‘input buffer’, ‘output means’, ‘adaptor for each IT systems’, ‘reference storage’, ‘loading’, ‘validating/comparing’ are similarly claimed in the other copending application. The only difference is that limitations the current application recites the

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different IT systems include any combination of SCDA, CMMs and GIs and in the other application the claims did not specify what the different IT systems include. It is obvious to one ordinary skill in the art to modify the different IT systems of the applied references in any other different kinds of IT systems. For example, Ghosh USPN 6925385 teaches different IT systems include any combination of SCDA, CMMs and GIs (see col. 3 lines 20-67, col. 10 lines 1-56 and figs. 1-2). Therefore it would be obvious to one ordinary skill in the art to retrieve, synchronize and validate the integrity in any many other different IT systems like of the GIS, SCADA and/or CMMS.

11. **Claims 1-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-8 of copending Application No. 10592865.** Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant case, all elements of claims 1-10 correspond to the claims of the copending claims and encompass the scope of claims 1-10 of the instant application. The instant application generally claims (**see claim 1**) A method that validates a consistency of attributes of entities modeling a physical asset of a utility, the entities are stored in data sets of a multitude of different IT systems of the utility comprising entities assigned to entity types and consistency validation service including 'input buffer', 'output means', 'adaptor for each IT systems', 'reference storage', 'loading', 'validating/comparing' are similarly claimed in the other copending application. The only difference is that limitations the current application recites the different IT systems include any combination of SCDA, CMMs and GIs and in the other application the claims did not specify what the different IT systems include. It is obvious to one

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ordinary skill in the art to modify the different IT systems of the applied references in any other different kinds of IT systems. For example, Ghosh USPN 6925385 teaches different IT systems include any combination of SCDA, CMMs and GIs (see col. 3 lines 20-67, col. 10 lines 1-56 and figs. 1-2). Therefore it would be obvious to one ordinary skill in the art to retrieve, synchronize and validate the integrity in any many other different IT systems like of the GIS, SCADA and/or CMMS.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. *Claims 1-10 of the instant application would have been obvious, to one ordinary skill in the art at the time of the invention was made, over claims 1-5 of the copending applications (10593094 or 10592865) because using equivalent wording in a different applications does not make the application/invention distinct and each limitation of the claims of the instant application are anticipated/equivalent by the claims of the copending applications and encompass the scope of claims 1-10 of the instant application.*

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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14. Claims 1, and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tindal et al. US Pub. 20020069274 in view of Stallings “SNMP and SNMPv2: The Infrastructure for Network Management”, Shorter et al. US PG Pubs. 20030004822 A1. and Ghosh USPN 6925385.

Regarding claim 1, Tindal et al. discloses a method that validates consistency of attributes of entities (**Network device configuration records e.g. of edge router, core router etc**) modeling a physical asset of a utility, said entities are stored in data sets of a multitude of different IT systems of the utility (**the network devices**) (**par. 0042 and 0044; ...The configuration reader 195 can also retrieve the intended configuration of the target device from the configuration storage 187 and pass that intended configuration to the configuration comparator 190. The configuration comparator 190 can then compare the actual configuration and the intended configuration and present the differences to the administrator 110...**),

wherein said entities are assigned to entity types (**network device types see par. 0044**), holding a list of available attributes (**every device's configuration record contains a set and/or subset of attributes/CIM data portion see par. 0042 and 0044**),

wherein a consistency service comprises

an input buffer in which an entity to be validated for consistency of its attributes can be placed (**par. 0042 and fig. 4; configuration comparator input**), output means in which the result of the consistency validation can be stored (**par. 0042 and fig. 4; configuration**

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comparator output outputs comparator result and stores to present the result to the administrator) and

communication means to communicate with the different IT systems (**network devices for communicating with the configuration reader module see par. 0042**), and

wherein a storage device holds references to the entity in the data sets of the various IT systems such that the entity in a specific IT system can be addressed (**the configuration reader module retrieves the network devices' configuration records i.e. the references to network device's configuration records are stored and that network device configuration's records can be addressed based on the stored references see par. 0042**), said method comprising the following steps:

loading the entity to be validated for consistency of attributes of the entity into the buffer of the consistency service, wherein the physical asset carries the attributes of the entity (**par. 42 and figs. 1-6**), reading the values of the attributes of the entity through the adapter of an IT system, comparing, in the consistency service, the values of the attributes to values of reference attributes stored in the consistency service, and storing consistency validating information in the output means, said consistency validating information depending on the results of the comparison of the values of the attributes to the values of the reference attributes (**the configuration record for the network device is retrieved from the configuration storage and/or the configuration record stored in the memory of the network device is retrieved by the configuration reader module and passed to the configuration comparator module where it is compared with the intended configuration record for this device, the result of**

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the comparison or consistency validation information are stored and presented to the administrator par. 0042).

It is considered to be implicitly disclosed in Tindal that the network devices have adapters for communicating with the configuration reader module according to par. 42 but the examiner combines Stallings as Tindal fails to explicitly teach whereas an adapter for each of the IT systems allows communication between the consistency service and the IT systems.

However Stallings discloses a simple network management protocol (SNMP) in a network management of IP-based networks, the SNMP retrieves the network devices' configuration data using GET-requests by sending get messages (*signal*) (see **fig. 1**), returning an error message "noSuchName" if the requested object does not exist (*verifying the existence of the specific configuration data*) (see **table 2 or Stallings**).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Stallings within the system of Tindal et al. because they are analogous in network monitoring and management. One would have been motivated to incorporate the teachings of Stallings to retrieve the network devices' configuration data.

The combination of Tindal and Stallings does not explicitly disclose wherein the reference storage a specific entity in specific IT system can be addressed through the adapter of the specific IT system and based on such a reference stored in the reference storage.

However Shorter et al. teaches a reference storage a specific entity in specific IT system can be addressed through the adapter of the specific IT system (see **fig. 2 adapters 110 and IT**

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systems in different retail channels 220... data control point 250) and based on such a reference stored in the reference storage (**see par. 27-29, 13-17 and figs. 1-2**).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Shorter et al. within the combination system because they are analogous in IT system. One would have been motivated to incorporate the teachings to using the information to access to access the devices and to improve performance (see par. 12-17). The combination as disclosed above does teach the plurality of IT systems (see for e.g. Tindal par. 44 'network devices' are multitude of different network systems'). The applicant's amended limitation reciting other different IT systems (any combination of SCADA, CMMS and GIS) would be obvious to one ordinary skill in the art to retrieve, synchronize and validate the integrity in any many other different IT systems. The examiner, for example, combines **Ghosh USPN 6925385** teaches different IT systems include any combination of SCDA, CMMs and GIs/SAP (**see col. 3 lines 20-67, col. 10 lines 1-56, col. 8 line 4 and figs. 1-2**). Therefore it would be obvious to one ordinary skill in the art to retrieve, synchronize and validate the integrity in any many other different IT systems like of the GIS, SCADA and/or CMMS.

Claim 7 recites a computer program product of claim 1 and it has been rejected based on the same reason as claim 1 above.

Regarding claim 8 Tindal et al. teaches a system that validates a consistency of attributes of entities modeling a physical asset of a utility, which entities are stored in data sets of a multitude of different IT systems (*the network devices*) (**par. 0042 and 0044; ...The configuration**

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reader 195 can also retrieve the intended configuration of the target device from the configuration storage 187 and pass that intended configuration to the configuration comparator 190. The configuration comparator 190 can then compare the actual configuration and the intended configuration and present the differences to the administrator 110...) of the utility and which entities are assigned to entity types holding a list of available attributes, said system comprising:

a consistency service (fig. 7) having:

an input buffer in which an entity to be validated for consistency of attributes of the entity can be placed, wherein the physical asset carries the attributes of the entity (**par. 0042 and fig. -- 6; configuration comparator input**),

output means for storing a result of the consistency validation can be stored (**par. 0042 and fig. 4; configuration comparator output outputs comparator result and stores to present the result to the administrator**) and

communication means for communicating with the different IT systems (**network devices adapters for communicating with the configuration reader module see par. 0042**), and wherein a reference storage device holds references to the entities in the data sets of the various IT systems such that a specific entity in a specific IT system can be addressed based on such a reference stored in the reference storage (**the configuration record for the network device is retrieved from the configuration storage and/or the configuration record stored in the memory of the network device is retrieved by the configuration reader module and passed to the configuration comparator module where it is compared with the intended**

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configuration record for this device, the result of the comparison or consistency validation information are stored and presented to the administrator par. 0042).

Tindal et al. fails to explicitly teach whereas an adapter for each of the IT systems allows communication between the consistency service and the IT systems.

However Stallings discloses a simple network management protocol (SNMP) in a network management of IP-based networks, the SNMP retrieves the network devices' configuration data using GET-requests by sending get messages (*signal*) (see **fig. 1**), returning an error message "noSuchName" if the requested object does not exist (*verifying the existence of the specific configuration data*) (see **table 2 or Stallings**).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Stallings within the system of Tindal et al. because they are analogous in network monitoring and management. One would have been motivated to incorporate the teachings of Stallings to retrieve the network devices' configuration data.

The combination of Tindal and Stallings does not explicitly disclose wherein the reference storage a specific entity in specific IT system can be addressed through the adapter of the specific IT system and based on such a reference stored in the reference storage.

However Shorter et al. teaches a reference storage a specific entity in specific IT system can be addressed through the adapter of the specific IT system (see **fig. 2 adapters 110 and IT systems in different retail channels 220... data control point 250**) and based on such a reference stored in the reference storage (see **par. 27-29, 13-17 and figs. 1-2**).

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Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Shorter et al. within the combination system because they are analogous in IT system. One would have been motivated to incorporate the teachings to using the information to access to access the devices and to improve performance (see par. 12-17). The combination as disclosed above does teach the plurality of IT systems (see for e.g. Tindal par. 44 'network devices' are multitude of different network systems'). The applicant's amended limitation reciting other different IT systems (any combination of SCADA, CMMS and GIS) would be obvious to one ordinary skill in the art to retrieve, synchronize and validate the integrity in any many other different IT systems. The examiner, for example, combines **Ghosh USPN 6925385** teaches different IT systems include any combination of SCADA, CMMs and GIs/SAP (see **col. 3 lines 20-67, col. 10 lines 1-56, col. 8 line 4 and figs. 1-2**). Therefore it would be obvious to one ordinary skill in the art to retrieve, synchronize and validate the integrity in any many other different IT systems like of the GIS, SCADA and/or CMMS.

Regarding claim 3 the combination further teaches wherein the adapter for each of the IT systems allows communication between the consistency service and the IT systems such that a signal sent by the consistency service to verify the existence of a specified data set of an IT system can be sent back to the consistency service if that specific data set exists, the method further comprising the following step:

the consistency service sending a signal to verify the existence of a specific data set of an IT system to the IT system holding the entity to be validated for consistency of attributes of the entities prior to reading the values from the attributes of the entity through the adapter of the IT

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system (**Tindal et al. par. 0042, 0033**), and aborting the consistency validating of the entity if the signal is not being sent back to the consistency service (**Tindal et al. par 0033-0036**).

Regarding claim 4, the combination teaches the method further comprising the following step: logging failure of consistency validation if the signal is not being sent back to the consistency service by adding entity, which was to be validated for consistency, and the IT system, which was not replying to the signal, to a log file (**Tindal et al. par. 0011 and 0016; central repository all network events... network manager determining and fixing based on the posted events**).

Regarding claim 5, the combination teaches the method further comprising the following step: the consistency service checking communication to the IT system holding the data set to be verified prior to sending signal to verify the existence of the specific data set of that IT system (**Tindal et al. par. 0027-0038 and 0037-0044**).

Regarding claim 6, the combination teaches the method, further comprising the following step: a multitude of entities to be validated for consistency being loaded into the buffer of the consistency service (**Tindal et al. fig. 4**), the consistency service successively processing the entities to be validated for consistency, sending out signals and storing consistency validating information in the output means (**Tindal et al. par. 0027-0038, and 0037-0044**).

Regarding claim 9, the combination teaches the consistency validation system wherein the

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reference storage further holds entity types (**network device types see par. 0044**), to which each entity can be assigned, said entity types defining a list of available attributes of the entities (**every device's configuration record contains a set and/or subset of attributes/CIM data portion see par. 0042 and 0044**).

15. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tindal et al., Stallings, Shorter et al., Ghosh and further in view of Menezes A J et al. "Hash functions and data integrity" Handbook of applied cryptography, CRC press series on discrete mathematics and its applications, BOCA RATON, FL, CRC press, US, 1997, pages 321-383, XP002275660 ISBN: 0-8493-8523-7"

Regarding claim 2 the combination fail to disclose wherein a hash code is computed from the values of the attributes read from the adapter and compared to a reference hash code computed from the values of the reference attributes, and the values of the attributes are compared to the values of the reference attributes by comparing the computed hash codes.

However Menezes teaches **using hash function for verifying the integrity of data see page 322 lines 4-15**.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the teachings of Menezes within the combination system to authenticate the integrity of the data.

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Regarding claim 10 the combination fail to teach consistency validating system, wherein the consistency service further holds a reference hash code computed from the values of the attributes and to be compared to a hash code computed from the values of the attributes of the specific entity. However Menezes teaches **using hash function for verifying the integrity of data see page 322 lines 4-15**. The rational for combining are the same as claim 2 above.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELENI A. SHIFERAW whose telephone number is (571)272-3867. The examiner can normally be reached on Mon-Fri 6:00am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser R. Moazzami can be reached on (571) 272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eleni A Shiferaw/

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Primary Examiner, Art Unit 2436